

CLAIMS

1. A set of instruments (10, 70) for implanting a knee prosthesis (1), the set including amongst others, a first instrument (10) for distracting the knee, which
5 instrument comprises firstly two branches (13, 14) movable relative to each other and respectively provided at their distal ends with means (26) for pressing against the tibia and with means (28) for pressing against the femur, and secondly means (16) for moving the distal ends
10 of the branches mutually apart, the set being characterized in that the means (26) for pressing against the tibia define a tibial bearing surface (26A) that is substantially plane, and in that the distraction instrument (10) is further provided with a device (12)
15 serving to locate, on at least one of the medial and lateral sides of the femur (F), the position for implanting at least one extramedullary pin (60; 61; 62) or the like in a direction (A; B; C) lying in a plane (P_F ; P_E) that is substantially parallel to the plane tibial bearing surface (26A) and that is situated at an
20 adjustable distance (K) from said tibial bearing surface.
2. A set of instruments according to claim 1, characterized in that the locator device (12) is
25 suitable, both on the medial side and on the lateral side of the femur (F), for locating the positions for implanting at least one pair of extramedullary pins (60; 61; 62) or the like along respective directions (A; B; C) lying in a common plane (P_F ; P_E) that is substantially
30 parallel to the plane tibial surface (26A) and that is situated at an adjustable distance (K) from said bearing surface.
3. A set of instruments according to claim 1 or claim 2,
35 characterized in that the locator device (12) is suitable, on a given side of the femur, for locating the positions for implanting two extramedullary pins or the

like (60, 61) in respective directions (A, B) lying in a common plane (P_F) substantially parallel to the plane tibial bearing surface (26A).

5 4. A set of instruments according to any preceding claim, characterized in that the locator device (12) includes extra-femoral jig means (43) for defining the directions (A; B; C) along which the pins (60; 61; 62) or the like are implanted, these jig means (43) defining, for
10 example, extramedullary guide holes (46 to 50, 46' to 50') for means for forming cavities for receiving the pins or the like.

15 5. A set of instruments according to claim 4, characterized in that the distraction instrument (10) includes a rod (20) secured to the branch (13) provided with the means (26) for pressing against the tibia, and extending lengthwise along a direction (X-X) that is substantially perpendicular to the plane containing the
20 plane tibial bearing surface (26A), and in that the locator device (12) includes moving connection means (30, 41, 42, 44, 45) between said rod and the jig means (43).

25 6. A set of instruments according to claim 5, characterized in that said moving connection means comprise first means (30) for moving the jig means (43) relative to the rod (20) in translation along said rod, and in that the locator device (12) includes adjustment and locking means (40, 36) for adjusting and locking the
30 position in translation of the jig means.

7. A set of instruments according to claim 6, characterized in that the distraction instrument (10) is provided with means for measuring the position in
35 translation of the jig means (43) relative to the rod (20), e.g. in the form of graduations carried by said rod.

8. A set of instruments according to claim 6 or claim 7, characterized in that said adjustment means (40) comprise a feeler (40a) for feeling the anterior cortex (F_c) of the femur (F).

9. A set of instruments according to any one of claims 5 to 8, characterized in that the moving connection means comprise second means (41) for moving the jig means (43) relative to the rod (20) in pivoting about the longitudinal axis (X-X) of said rod.

10. A set of instruments according to any one of claims 5 to 9, characterized in that the moving connection means include third means (42, 44) for moving the jig means (43) relative to the rod (20) in two directions (F_3 , F_4) that are substantially perpendicular to the longitudinal direction (X-X) of the rod and substantially perpendicular to each other.

11. A set of instruments according to any one of claims 5 to 10, characterized in that it includes an extramedullary sight part (55) for sighting the head of the femur and adapted to extend substantially parallel to the longitudinal direction (X-X) of the rod (20).

12. A set of instruments according to any preceding claim, characterized in that the means (28) for pressing against the femur define a convex elongate surface (28A) for pressing against the femur between the condyles thereof, and having a transverse dimension (e) that is preferably less than about 9 mm.

13. A set of instruments according to any preceding claim, characterized in that it includes a second instrument (70) for cutting the femur, fitted with means (78, 79) for positioning the instrument relative to the

femur (F), that are adapted to co-operate with projecting portions of pins or the like (60 to 62) implanted in the femur along directions (A, B, C) defined by the locator device (12) of the distraction instrument (10), said
5 projecting portions projecting from the medial and lateral sides of the femur (F).

14. A set of instruments according to claim 13,
characterized in that the cutter instrument (70) defines
10 at least a plane posterior cutting slot (73) and a plane distal cutting slot (71), and in that the positioning means comprise both a first pair of bearing surfaces (78) for bearing against some (60, 61) of said pins or the like (60 to 62), substantially parallel to the posterior
15 cutting slot (73), and a second pair of bearing surfaces (79) for bearing against others (62) of said pins or the like, substantially parallel to the distal cutting slot (71), the distance (Δ) between said first pair of bearing surfaces (78) and the plane of the posterior cutting slot
20 (73) being substantially equal to the distance (Δ) between said second pair of bearing surfaces (79) and the plane of the distal cutting slot (71).